PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION *US/08/936,657*

DATE: 02/02/2000
TIME: 16:00:12

INPUT SET: S30066.raw

This Raw Listing contains the General
Information Section and up to the first 5 pages.

```
1                                     SEQUENCE LISTING
2
3    (1)     General Information:
4
5
6       (i)   APPLICANT:                      Fritz Eckstein
7                                             Wolfgang Pieken
8                                             Fritz Benseler
9                                             David Olsen
10                                            David Williams
11
12
13
14      (ii)  TITLE OF INVENTION:             MODIFIED RIBOZYMES
15
16
17      (iii) NUMBER OF SEQUENCES:            15
18
19
20      (iv)  CORRESPONDENCE ADDRESS:
21
22            (A)   ADDRESSEE:                Lyon & Lyon
23            (B)   STREET:                   633 West Fifth Street
24                                            Suite 4700
25            (C)   CITY:                     Los Angeles
26            (D)   STATE:                    California
27            (E)   COUNTRY:                  U.S.A.
28            (F)   ZIP:                      90071
29
30
31      (v)   COMPUTER READABLE FORM:
32
33            (A)   MEDIUM TYPE:              3.5" Diskette, 1.44 Mb
34                                            storage
35            (B)   COMPUTER:                 IBM Compatible
36            (C)   OPERATING SYSTEM:         IBM P.C. DOS 5.0
37            (D)   SOFTWARE:                 FastSEQ Version 1.5
38
39
40      (vi)  CURRENT APPLICATION DATA:
41
42            (A)   APPLICATION NUMBER:       08/936,657
43            (B)   FILING DATE:
44
45
46      (vii) PRIOR APPLICATION DATA:
```

ENTERED

INPUT SET: S30066.raw

```
47
48          (A)  APPLICATION NUMBER:     07/965,411
49          (B)  FILING DATE:            August 9, 1993
50
51
52     (viii)  ATTORNEY/AGENT INFORMATION:
53
54          (A)  NAME:                        Warburg, Richard
55          (B)  REGISTRATION NUMBER:         32,327
56          (C)  REFERENCE/DOCKET NUMBER:     195/036
57
58
59      (ix)  TELECOMMUNICATION INFORMATION:
60
61          (A)  TELEPHONE:                   (213) 489-1600
62          (B)  TELEFAX:                     (213) 955-0440
63          (C)  TELEX:                       67-3510
64
65
66
67
68
69  (2) INFORMATION FOR SEQ ID NO:    1:
70
71      (i) SEQUENCE CHARACTERISTICS:
72
73          (A) LENGTH:            32
74          (B) TYPE:             nucleic acid
75          (C) STRANDEDNESS:     single
76          (D) TOPOLOGY:         linear
77
78     (ii) SEQUENCE DESCRIPTION:  SEQ ID NO:  1:
79
80  GATATCCTGA CTCCCTATAG TGAGTCGTAT TA                          32
81
82
83
84
85  (2) INFORMATION FOR SEQ ID NO:    2:
86
87      (i) SEQUENCE CHARACTERISTICS:
88
89          (A) LENGTH:            36
90          (B) TYPE:             nucleic acid
91          (C) STRANDEDNESS:     single
92          (D) TOPOLOGY:         linear
93
94     (ii) SEQUENCE DESCRIPTION:  SEQ ID NO:  2:
95
96  TAATACGACT CACTATAGGG AGTCAGGATA TCTGCA                      36
97
98
99
```

INPUT SET: S30066.raw

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100
101    (2) INFORMATION FOR SEQ ID NO:    3:
102
103        (i) SEQUENCE CHARACTERISTICS:
104
105            (A) LENGTH:              51
106            (B) TYPE:                nucleic acid
107            (C) STRANDEDNESS:        single
108            (D) TOPOLOGY:            linear
109
110        (ii) SEQUENCE DESCRIPTION:  SEQ ID NO:  3:
111
112    GGAGTTTCGG CCTAACGGCC TCATCAGAGG ACCCTATAGT GAGTCGTATT A   51
113
114
115
116    (2) INFORMATION FOR SEQ ID NO:    4:
117
118        (i) SEQUENCE CHARACTERISTICS:
119
120            (A) LENGTH:              55
121            (B) TYPE:                nucleic acid
122            (C) STRANDEDNESS:        single
123            (D) TOPOLOGY:            linear
124
125        (ii) SEQUENCE DESCRIPTION:  SEQ ID NO:  4:
126
127    TAATACGACT CACTATAGGG TCCTCTGATG AGGCCGTTAG GCCGAAACTC CTGCA   55
128
129
130
131
132
133
134    (2) INFORMATION FOR SEQ ID NO:    5:
135
136        (i) SEQUENCE CHARACTERISTICS:
137
138            (A) LENGTH:              34
139            (B) TYPE:                nucleic acid
140            (C) STRANDEDNESS:        single
141            (D) TOPOLOGY:            linear
142
143        (ii) SEQUENCE DESCRIPTION:  SEQ ID NO:  5:
144
145    GGGUCCUCUG AUGAGGCCGU UAGGCCGAAA CUCC                    34
146
147
148
149
150    (2) INFORMATION FOR SEQ ID NO:    6:
151
152        (i) SEQUENCE CHARACTERISTICS:
```

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153
154              (A) LENGTH:              34
155              (B) TYPE:                nucleic acid
156              (C) STRANDEDNESS:        single
157              (D) TOPOLOGY:            linear
158
159        (ix) FEATURE:
160
161              (D) OTHER INFORMATION:   The letter "N" stands for
162                                       2'-fluorouridine.
163
164        (ii) SEQUENCE DESCRIPTION:  SEQ ID NO:  6:
165
166   GGGNCCNCNG ANGAGGCCGN NAGGCCGAAA CNCC                       34
167
168
169
170   (2) INFORMATION FOR SEQ ID NO:    7:
171
172        (i) SEQUENCE CHARACTERISTICS:
173
174              (A) LENGTH:              34
175              (B) TYPE:                nucleic acid
176              (C) STRANDEDNESS:        single
177              (D) TOPOLOGY:            linear
178
179        (ix) FEATURE:
180
181              (D) OTHER INFORMATION:   The letter "N" stands for
182                                       2'-aminouridine.
183
184        (ii) SEQUENCE DESCRIPTION:  SEQ ID NO:  7:
185
186   GGGNCCNCNG ANGAGGCCGN NAGGCCGAAA CNCC                       34
187
188                           .
189
190   (2) INFORMATION FOR SEQ ID NO:    8:
191
192        (i) SEQUENCE CHARACTERISTICS:
193
194              (A) LENGTH:              12
195              (B) TYPE:                nucleic acid
196              (C) STRANDEDNESS:        single
197              (D) TOPOLOGY:            linear
198
199        (ii) SEQUENCE DESCRIPTION:  SEQ ID NO:  8:
200
201   GGGAGUCAGG AU                                               12
202
203
204
205   (2) INFORMATION FOR SEQ ID NO:    9:
```

```
206
207          (i) SEQUENCE CHARACTERISTICS:
208
209                (A) LENGTH:            12
210                (B) TYPE:              nucleic acid
211                (C) STRANDEDNESS:      single
212                (D) TOPOLOGY:          linear
213
214          (ix) FEATURE:
215
216                (D) OTHER INFORMATION:  The letter "N" stands for
217                                        2'-fluorouridine.
218
219          (ii) SEQUENCE DESCRIPTION:  SEQ ID NO:  9:
220
221    GGGAGNCAGG AN                                        12
222
223
224
225    (2) INFORMATION FOR SEQ ID NO:    10:
226
227          (i) SEQUENCE CHARACTERISTICS:
228
229                (A) LENGTH:            12
230                (B) TYPE:              nucleic acid
231                (C) STRANDEDNESS:      single
232                (D) TOPOLOGY:          linear
233
234          (ix) FEATURE:
235
236                (D) OTHER INFORMATION:  The letter "N" stands for
237                                        2'-fluorocytidine.
238
239          (ii) SEQUENCE DESCRIPTION:  SEQ ID NO:  10:
240
241    GGGAGUNAGG AU                                        12
242
243
244
245
246    (2) INFORMATION FOR SEQ ID NO:    11:
247
248          (i) SEQUENCE CHARACTERISTICS:
249
250                (A) LENGTH:            12
251                (B) TYPE:              nucleic acid
252                (C) STRANDEDNESS:      single
253                (D) TOPOLOGY:          linear
254
255          (ix) FEATURE:
256
257                (D) OTHER INFORMATION:  The letter "N" stands for
258                                        2'-aminouridine.
```

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION *US/08/936,657*

Line   Error   Original Text